SIEMENS

MAMMOMAT 3000

SP

Stereotactic Biopsy Attachment

Installation and Setting Instructions

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English
11.97

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Table of contents

Page

1 Prerequisites 1-1
Documents required 1-1
Equipment required 1-1
Scope of delivery 1-2
Unpacking 1-2
Important notes 1-2
Pocket terminal 1-2
Safety and protective measures 1-2

2 Disassembly 2-1
Covers 2-1

3 Connection of the Evaluation Unit 3-1
Power and signal cable to evaluation unit 3-1
Adaption to line voltage 3-2

4 Start-up and Test 4-1
Programming the evaluation unit 4-1
Final check exposures 4-1
Indicating the zero mark (ZERO SET) on the object table 4-1
Executing “ZERO-SET” on the evaluation unit 4-1
On the biopsy unit 4-2
Check 4-2

5 Protective Earth Measurement 5-1
Biopsy unit 5-1
Measurement 5-1
Result 5-1
Evaluation unit 5-2
Mounting the coverplate 5-2
Measurement 5-2
Result 5-2

6 Storing 6-1
Recommended storing space 6-1

7 Appendix 7-1
Test protocol Repetiveness 7-1
Test protocol Protective earth measurement 7-2

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Documents required

- Wiring Diagram, MAMMOMAT 3000
- Wiring Diagram, Stereotactic Biopsy Attachment
- Installation and Start-up Instructions, MAMMOMAT 3000
- Operating Instructions, MAMMOMAT 3000
- Service Instructions, MAMMOMAT 3000
- Programming and Tests, MAMMOMAT 3000, Stereotactic Biopsy Attachment

Equipment required

- Standard assembly tools
- Drill, 3 mm
- Ground wire tester (≤ 6V/10-25A)
- Pocket terminal PT 510, or Service PC with interface, connection cable and software fore PT 510 emulation.
- Stereo test phantom
- Tipp-ex correction fluid
- Lead ruler
- Biopsy needle holder
- Biopsy needle

Scope of delivery

The complete Stereotactic Biopsy Attachment is delivered in one cardboard box on a wooden pallet:

Dimensions:	length 800 mm, width 600 mm, height 800 mm
Weight:	40 kg

The following is included in the cardboard box:

Stereotactic Biopsy Attachment	**61 34 915 X041E**
Biopsy unit	62 93 588 X041E
Compression plate	62 94 073 X041E
Evaluation unit	62 93 851 X041E
230V connection cable	63 86 366 X041E
Stereo collimator	62 58 193 X041E
Needle holder	97 20 376 G2116
Communication cable	63 86 291X041E

Unpacking

As a general rule, the directional marks on the box should be observed during transport, storage and unpacking.
The cardboard box is secured to the wooden pallet with plastic straps.

Important notes

Pocket terminal

The pocket terminal is needed only for programming the evaluation unit.

NOTE!

If the generator is switched off with the pocket terminal connected, wait approximately 5 seconds before switching it on again.

Safety and protective measures

It is essential to comply with the section “Protective Measures” in the MAMMOMAT 3000 Installation and Start-up Instructions.

Covers

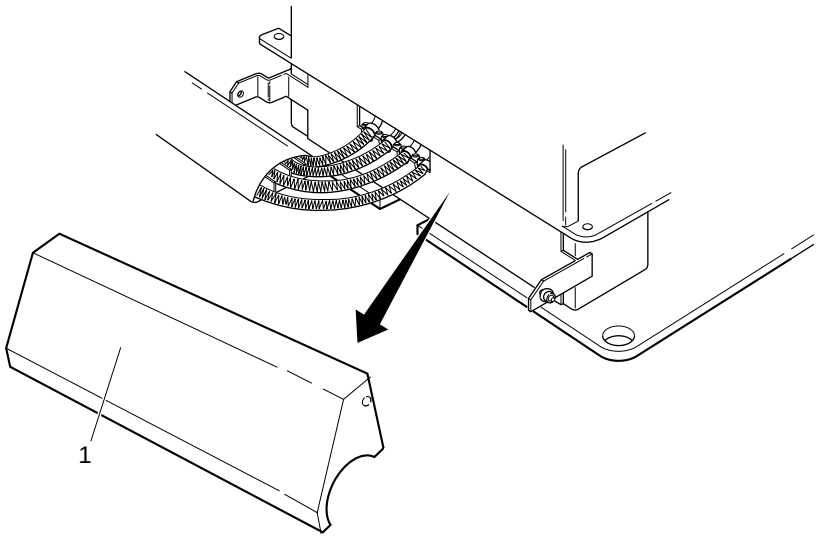

Figure 1 The cable outlet cover

Before installation of the stereotactic biopsy attachment, remove the cable outlet cover (1). For detailed instructions, see “Installation and Start-up Instructions” for MAMMOMAT 3000.

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Power and signal cable to evaluation unit

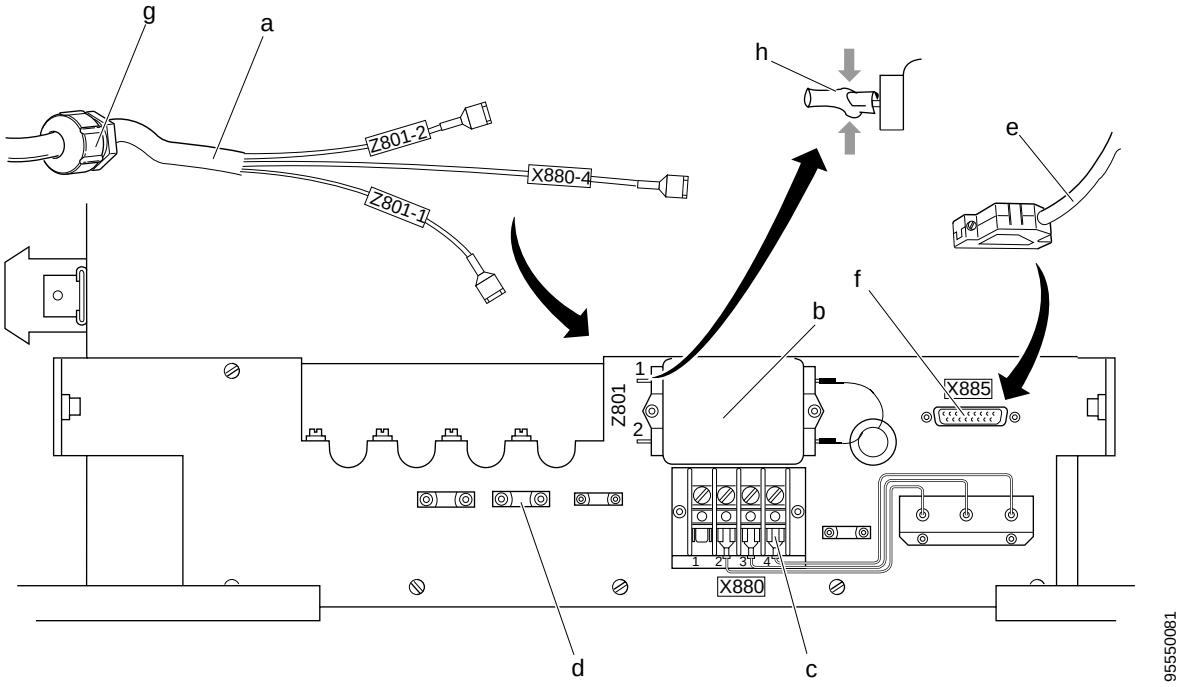

Figure 1 Power and signal cable

1 Remove the zero force fast-on connector (h), press as marked.

2 Connect the power cable (a) of the evaluation unit to Z801 (b) terminal 1 and 2 and protective ground to X880 (c) terminal 4.

3 Strain-relieve the power cable at (d). Park the strain-relieve (g) used on stand serial No < 3001 inside the cable outlet cover.

4 Connect the signal cable (e) of the evaluation unit to X885 (f).

5 Fit the cable outlet cover to the stand and fasten with screws and contact washers.

If serial No < 3001 on the stand connect the power cable and signal cable as follows:

1 Signal cable to stand right side X885.

2 Remark the power cable mark flags with stickers included in the plastic bag marked 63 86 366 as described below.

Z801-1 to X881-2

Z801-2 to X881-3

X880-4 to X881-1

3 Connect the power cable as remarked to X881.

4 Strain relieve (g) the power cable in a free cable relief holder at the backside of the stand, see Installation and Start-up Instruction chapter 5 figure 8.

Adaption to line voltage

The evaluation unit is set to work with a line voltage of 230 V/50 Hz. If the line voltage from your local distributor differs, change the setting of the evaluation unit according to the following:

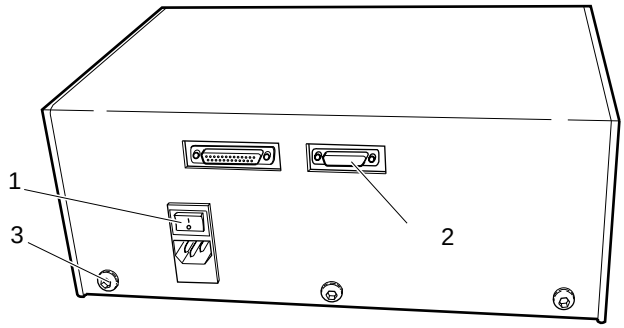

Figure 2 Removing the cover plate

1 Check that the main switch (1) is off and that the OFF-button on the control panel at the generator is pressed.

2 Remove the ESD-protective cap (2).

CAUTION!

When lifting the cover plate (4/Fig. 3), be careful not to overstrain the short flat cable (5/Fig. 3) connected at the underside of the cover plate.

3 Remove the Allen screws (3), ***carefully*** lift the cover plate (4) and disconnect flat cable (5) and ground wire (6), see Figure 3, connected at the underside of the cover plate.

4 Remove the cover plate (4) according to figure 4.

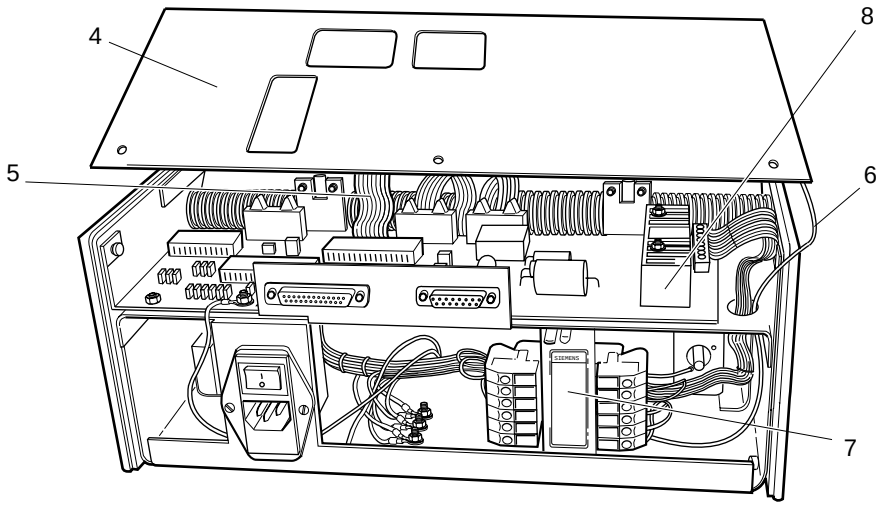

Figure 3 Transformer T1 at the evaluation unit

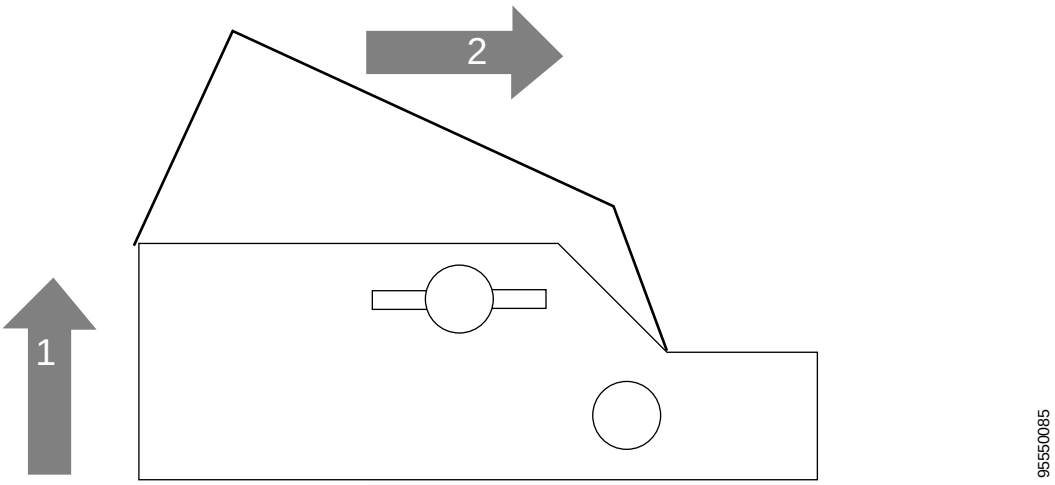

Figure 4 Removal of the cover plate

5 If the frequency is 60 Hz: Reconnect cable from T1.4 to T1.5 at the transformer T1 (7)
If the voltage is 240 V: Reconnect cable from T1.3 to T1.5.

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Programming the evaluation unit

The programming is carried out according to instructions in “Programming and Tests MAMMOMAT 3000 Stereotactic Biopsy Attachment”.

If PT 510 is used, remove the locking bracket on connector.

Programming of the evaluation unit must be carried out with pocket terminal PT 510 or Service PC by selecting the following modules:

03 “Adj: Needle” (program the needle length used)

05 “Adj. Poti range” (compression potentiometer only)

06 “Adj. Poti offset”

07 “Adj. Compr. offset”

08 “Display Comp.dist.” (Check compression-plate distance to object table).

14 “EEPROM Sumcheck”

Final check exposures

1 Use a stereo test phantom or place 3 or 4 metal objects, for example paper clips or needles, at different levels within the stereo volume, 0 to 100 mm above the object table.

2 Make a stereo exposure (see Operating Instructions) and evaluate on the evaluation unit.

3 Insert the needle

4 The point of the needle must coincide with the space point of the metal object. Fill in your values in the test protocol for repetiveness (see Appendix).
Tolerances: ±1.0 mm in X, Y and Z axis.

5 Repeat step 4 with the other space points.

Indicating the zero mark (ZERO SET) on the object table

Executing “ZERO-SET” on the evaluation unit

1 Push the button.

2 Push the “ZERO SET” button.

3 Push the “POSITION SET” button.

NOTE!

The position of the measuring cross of the evaluation unit plays no part in this procedure.

On the biopsy unit

1 Set X-display to 0.0.

2 Set Y-display to -5.0. Z-display value of no significance.

3 Insert needle (90 mm or longer).

4 Lower the needle and stop just before the point of the needle touches the object table.

5 Cover the area under the needle with a piece of adhesive tape.

6 Lower the needle carefully just to make a mark in the tape.

7 Place the 3 mm drill on the mark in the tape and drill by hand a 0.1 mm deep hole in the Lexan top of the object table, through the tape.

8 Cover the hole with correction fluid (Tipp-ex).

9 Remove the tape. The white dot now left on the object table represents the zero mark.

Check

1 Execute the “ZERO-SET” procedure on the evaluation unit, see above.

2 Enter the length of the needle being used.

3 The display on the evaluation unit must show:
X = 0.0
Y = +5.0
Z = -1.7

4 Set the following values on the biopsy unit:
X = 0.0
Y = -5.0
Z = +1.7

5 The point of the needle must coincide with the white marking on the object table.

NOTE!

After completion of programming, be sure to plug jumper X8 back to 1-2 for the E^2PROM.

Biopsy unit

Measurement

Use the protective ground wire tester (≤ 6V/10-25A).

1 Measure the resistance between ground connection (X899) of the stand and points on biopsy unit according to Figure 5. Use a sharp-pointed tool to penetrate the finishing paint.
Fill in your values in the test protocol for protective earth measurement (see Appendix).

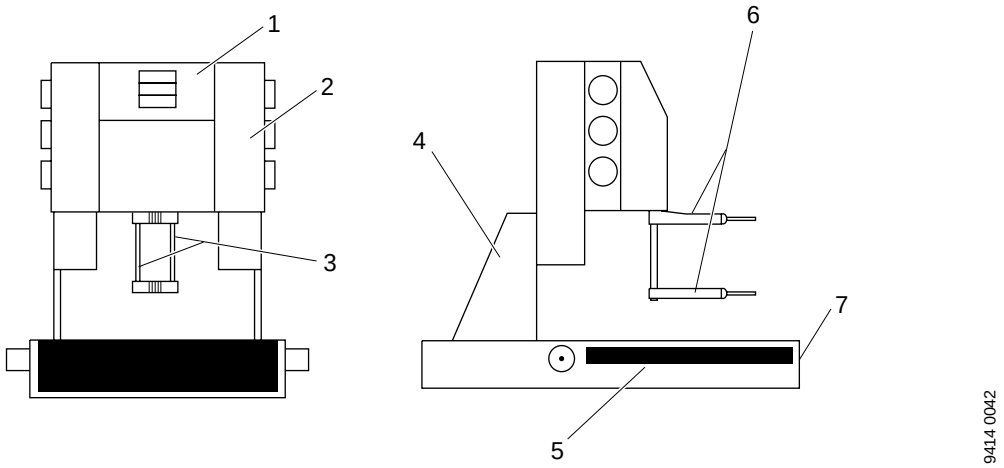

Figure 5 Measuring points at the biopsy unit

Result

The value of the resistance measured must not exceed 0.1 Ω, except for measuring points 3 and 6 for which no limit is required (the test performed complies with IEC 601-1 sub clause 18A).

Evaluation unit

Mounting the cover plate

See Figure 3 and Figure 4.

1 Fit the cover plate and cables (5) and (6) back to place in reverse order to what is described in page 3-2.

NOTE!

When closing the cover plate, make sure that the protective ground wire (6) does not come in contact with the cooling flange (8).

Measurement

Use the protective ground wire tester (≤ 6V/10-25A).

1 Measure the resistance between ground connection (X899) of the stand and points on the evaluation unit according to Figure 6. Use a sharp-pointed tool to penetrate the finishing paint.
Fill in your values in the test protocol for protective earth measurement (see Appendix).

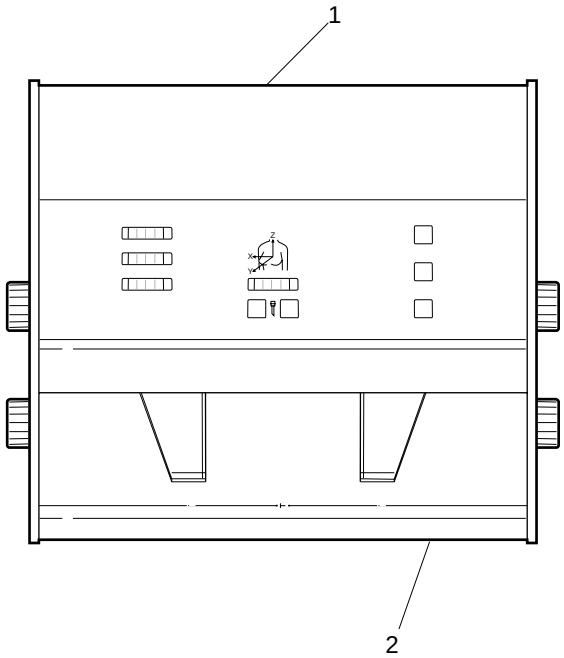

Figure 6 Measuring points at the evaluation unit

Result

The value of the resistance measured must not exceed 0.1 Ω.

Recommended storing space

It is recommended that the biopsy attachment and evaluation unit be stored beside each other on a wall mounted shelf.

The size of the shelf should be approx. 500 x 900 mm. The height of the evaluation unit is 410 mm.

CAUTION!

The maximum length of the cable between the evaluation unit and stand is 5 m.

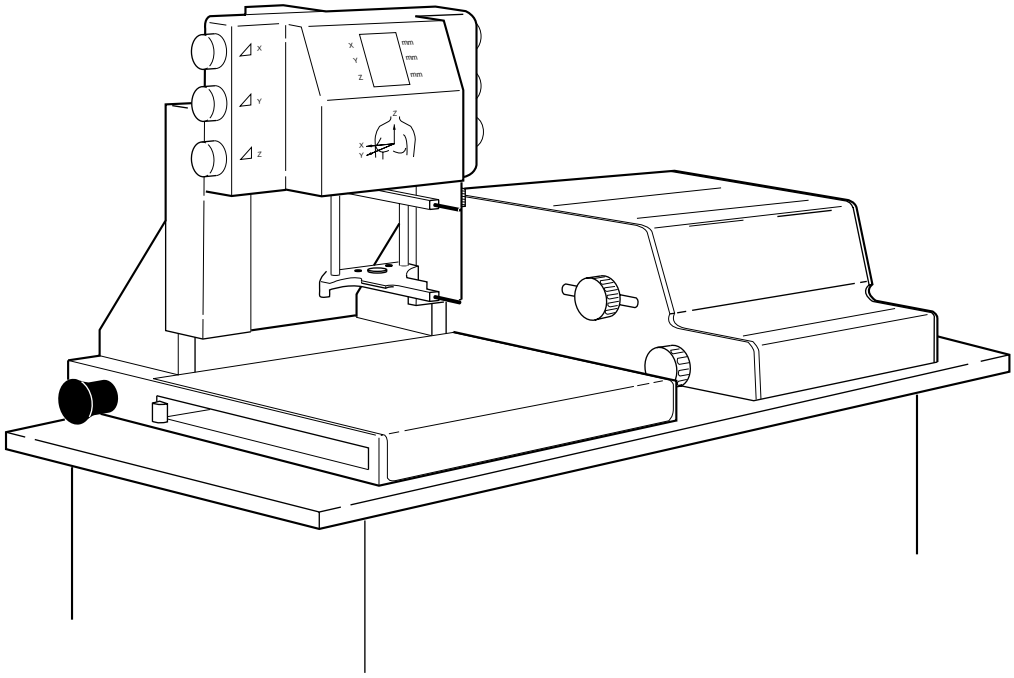

Figure 7 Storing biopsy attachment and evaluation unit

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Test protocol Repetiveness

Exposure data

Date:			
Place:			
Tester:			Unit Nr below
Film Nr:		Biopsy unit:	
Cassette:		Evaluation unit:	
Compression force:		Stand:	
Rotation angle:		Phantom:	

Evaluation data

Tester	Object	X	Y	Z	ΔX	ΔY	ΔZ
	1						
	1						
	1						
	1						
	2						
	2						
	2						
	2						
	3						
	3						
	3						
	3						
	4						
	4						
	4						
	4						

Testers:

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Test protocol Protective earth measurement

Biopsy unit

Measuring point	Resistance [Ω]	Resistance limit [Ω]
1		0.1
2		0.1
3		no limit
4		0.1
5		0.1
6		no limit
7		0.1

Evaluation unit

Measuring point	Resistance [Ω]	Resistance limit [Ω]
1		0.1
2		0.1

Testers:

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